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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/815,037

**Applicant(s)**

PETROV ET AL.

**Examiner**

RASHEDUL HASSAN

**Art Unit**

2179

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 5-13, 15, 16, 20, 21, 23-26, 28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-13, 15-16, 20-21, 23-26, 28 and 29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

Claim 25 is objected to because of the following informalities:

Claim 25 recites the limitation "**an** computer-readable medium" in line 2 (emphasis added). The limitation should be corrected to recite "a computer-readable medium" instead.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 5-10, 13, 15-16, 20-21, 23-26, and 28-29 rejected under 35 U.S.C. 103(a) as being unpatentable over Hessmer et al. (US 2002/0112044 A1) hereinafter Hessmer, in view of E et al. (US 2004/0019639 A1) hereinafter E, and further in view of Melchione et al. (US 2002/0091819 A1) hereinafter Melchione.

For Claim 1, Hessmer teaches **a computer-implemented method employed within a network of application server instances** (e.g., one embodiment of a network of application server instances, e.g., data access server instances, is illustrated in Fig. 1, see [0028]) **comprising:**

**displaying a hierarchical tree structure having one or more tree nodes in a graphical user interface, each of the one or more tree nodes representing a resource of an application server instance** (i.e., see Fig. 4 illustrating a hierarchical tree structure having one or more tree nodes to be displayed in a left pane of a graphical user interface, each of the one or more tree nodes representing a resource of an application server instance. See accompanying discussion in paragraphs [0056-0057]. Also see paragraphs [0024-0027] which provide description of a diagnostic object/root illustrated as tree nodes in Fig. 4).

The preamble of the claim further recites that the method is **employed within a network of application server instances having a cluster architecture**, and the claim further recites that the above mentioned one or more tree nodes of the hierarchical tree structure represents a resource of an application server instance **within a cluster of application server instances, each application server instance**

***within the cluster of application server instances having a group of server nodes configured with a redundant set of application logic and associated data, and a dispatcher in communication with a central service associated with the cluster of application server instances, the central service having a locking service and a messaging service.*** Hessmer fails to teach employing his method (i.e., the method of displaying a hierarchical tree structure having one or more tree nodes in a graphical user interface, each of the one or more tree nodes representing a resource of an application server instance) within a network of application server instances having the cluster architecture with all of the above limitations recited in the claim. In particular, Hessmer fails to clearly address *"a redundant set of application logic and associated data"*, as well as *"a dispatcher"*, *"a central service"*, *"a locking service"* and *"a messaging service"* as recited in the claim. However, the Examiner notes that the instant specification does not provide any limiting definition for the terminology "dispatcher" utilized in the claim. Referring to Fig. 13, paragraph [00084] mentions, "In one embodiment, dispatcher 1312 distributes service requests from clients to one or more of server nodes 1314, 1316, 1318 based on the load on each of the servers". Therefore, without limiting, one interpretation of the term "dispatcher" in light of one embodiment disclosed in the specification could be "a module used for load balancing". The specification also does not provide any limiting definition for the terminology "locking service" and "messaging service" utilized in the claim. E teaches ***a cluster of application server instances*** (e.g., 104A and 104B in Fig. 1. E mentions, "Enterprise server 102 may be

implemented or clustered across one or more of the same computer systems as application servers 104, or on one or more separate computer systems." See [0035]), ***each application server instance within the cluster of application server instances having a group of server nodes configured with a redundant set of application logic and associated data*** (e.g., each application server instance 104 within the cluster of application server instances as illustrated in Fig. 1 has a group of processes 106, and associated data 108. These processes 106 can be interpreted as the claimed "*server nodes*" since they provide data and/or services for use by the clients. See [0035], wherein E mentions, "In one embodiment, the applications and/or processes within the application servers may provide data and/or services to enterprise server 102, for example, for use by the clients". Or in the alternative, it would have been at least obvious to those of ordinary skill in the art to have some of these processes as server processes. Additionally, it is implicit or would have been at least obvious to those of ordinary skill in the art, according to the E reference that the processes 106 are, or can easily be, configured with a redundant set of application logic. This is because Fig. 1 illustrates a distributed data system, and regarding distributed data system, E explicitly mentions, "Distributed data systems may provide for load balancing and fail over to improve the overall quality of service of the system." See [0006]. Thus it is implicit or at least would have been obvious to have the distributed data system as illustrated in Fig. 1 to provide load balancing and fail-over mechanism and thereby

providing redundant set of logic in some of the processes 106), **and a dispatcher** (e.g., the module controlling the load balancing functionality) **in communication with a central service** (e.g., distributed store 110 in Fig. 1) **associated with the cluster of application server instances, the central service having a locking service** (e.g., lock mechanism 114 in Fig. 1) **and a messaging service** (see [0039] for messaging service for obtaining a token). Therefore, E teaches the above additional limitations of the claim not explicitly taught in Hessmer. The question is whether it would have been obvious to one skilled in the art to combine the teaching of these two references.

Hessmer teaches a method for collecting diagnostic data and presenting the diagnostic data in nodes of a GUI having a tree structure for monitoring the configuration and operation of data access servers and associated data source devices employed within a distributed data system (see Abstract, also [0006-0008], see Fig. 4 for the tree structure). His technique of providing a GUI with a tree structure wherein the nodes of the tree represent diagnostic data is similar to the claimed method and thus relied on by the Examiner in this rejection. Hessmer however does not explicitly mention using this GUI technique in a network having the cluster architecture as claimed. But, the Examiner considers that his method of presenting diagnostic information in a GUI according to the specified manner can obviously be used with many different network architectures, and in particularly is very useful for distributed network architectures as explicitly suggested by Hessmer (see [0008]). E teaches an improved locking mechanism to help prevent inconsistency in the distributed data and avoid data clobbering issues that are often experienced in a distributed data system (see

"Description of the Related Art" section). E illustrates his technique in a network having the clustered architecture similar to the one claimed. The cluster architecture exemplified by E is a distributed network system for which Hessmer explicitly suggested using his technique in order to minimize the delays encountered when tuning the operation of the system as mentioned above. Therefore, the Examiner believes that it would have been obvious to a person of ordinary skill in the art to combine Hessmer and E in order to use the diagnostic GUI of Hessmer to monitor the clustered network used in E.

Claim 1 further requires, " **wherein at least one of the tree nodes represents a service of the application server instance within the cluster of application server instances**". The instant specification mentions, "The term 'service' refers to functionality derived from a particular software program. The functionality provided by a service may include, and is not limited to, lifecycle management, security, connectivity, transactions, and/or persistence" (see [00063]). Referring to Fig. 4 of Hessmer, some of the nodes of the hierarchical tree represents a "Root" of a particular type. Each of these Roots are software programs (see [0027]) that provides "functionality", i.e., provides monitoring information of a particular type associated with corresponding data access server (see Fig. 3 for various types of default diagnostic root types, i.e., service types. One of the root types is explicitly mentioned as "Transactions" 230). Thus this limitation is met by Hessmer.

Claim 1 further requires,



***"selecting the tree node representing the service of the application server instance within the cluster of application server instances;***

***displaying a list of one or more service references associated with the service represented by the selected tree node in the graphical user interface;"***

The instant specification mentions, "The term 'service reference' broadly refers to a software module that provides a 'service' to a service" (see [00065]). In other words, the limitations require that when a node that represents functionality of a software module or program is selected, a list of one or more software modules used by the software module represented by the node is displayed. It has been already discussed above that in Hessmer, the "Root" nodes in Fig. 4 represent a "service" or "functionality" of a software module, since "Root" is a "diagnostic object" created from a "class" and hence is a software module (see [0027]). Hessmer further teaches that once a Root is selected from the tree, lower levels and their associated information are further exposed ("scalability of elements to expose lower levels and their associated information", see [0056]). Thus Hessmer teaches displaying a list of service references upon selection of a tree node representing service of the application server as required by the claim.

Claim 1 further requires, "***displaying a relationship value for each listed service reference, wherein the relationship value is to specify whether the listed service reference is to be automatically started when the service represented by the selected tree node is started***". Although, Hessmer teaches displaying associated information of the service references, he nevertheless does not disclose "*displaying a*

*relationship value for each listed service reference, wherein the relationship value is to specify whether the listed service reference is to be automatically started when the service represented by the selected tree node is started"* as required by the claim. E also does not appear to cure this deficiency. However, similar to Hessmer, Melchione also teaches a method for the configuration, management, and/or monitoring of computer applications and devices via a computer network. Like Hessmer who teaches displaying a tree node representing a service (i.e., a Root/diagnostic object software module), Melchione also teaches at least one of the tree nodes represents a service (e.g., a tree node "VirusScan for Win9x" in Fig. 4 and 5) of a computer application and/or device, selecting the tree node representing the service (selection of "VirusScan For Win9x" as in Fig. 4 or "E-Mail scan" service as shown in Fig. 5), and displaying a list of one or more service references associated with the service represented by the selected tree node in the graphical user interface (multiple service references as shown in window pane 406B in Fig. 4 and 5), and displaying a relationship value, for each listed service reference, wherein the relationship value is to specify whether the listed service reference is to be automatically started when the service represented by the selected tree node is started (e.g., the status of the radio buttons and check boxes constitute a relationship value that specify whether the associated service reference is to be automatically started when the service represented by the selected tree node is started, also see the prosecution history, specifically the "Response to Arguments" section of the OA on 07/16/2007 and the rejection of claim 1 in that OA). Therefore, Melchione illustrates an embodiment of one aspect of his invention that when combined

with Hessmer and E teaches all the limitations of the instant invention. The Examiner believes that it would have been obvious to a person of ordinary skill in the art to combine Melchione with Hessmer and E in order to arrive at the present invention. For example, it would have been obvious to those skilled in the art to incorporate the services associated with the Virus scan service as illustrated by Melchione into the application servers of the combined invention of Hessmer and E because protecting the application servers using a virus scan service makes common sense and is considered to be highly desirable so that the servers can be protected from malicious software.

Independent claims 10 (apparatus), 20 (system) and 25 (an article of manufacture) recite similar limitations as claim 1 and therefore have been rejected under the same rationale as discussed in detail for claim 1.

For claim 2, Hessmer further teaches ***displaying the hierarchical tree structure having one or more tree nodes in the graphical user interface comprises:***

***displaying the hierarchical tree structure in a first window pane of the graphical user interface*** (e.g., "In an embodiment of the invention, the diagnostic utility supports creating a graphical image in the form of a window comprising two side-by-side pages. A tree structure diagram having structures similar to the depicted structure of Fig. 4 is depicted in the left pane of the graphical user interface associated with the diagnostic utility 110. [0056]); ***and wherein displaying the list of one or***

***more service references associated with the selected tree node in the graphical user interface comprises: displaying the list of one or more service references associated with the service represented by the selected tree node in a second window pane of the graphical user interface*** (e.g., When a user selects one of the depicted nodes of the depicted root structure, the diagnostic utility presents data related to the node, and currently possessed by the diagnostic utility, within the right side pane of the graphical user interface. [0056]).

Furthermore Melchione also teaches displaying the hierarchical tree structure having one or more tree nodes in the graphical user interface comprises:

displaying the hierarchical tree structure in a first window pane of the graphical user interface (404A in Fig. 4 and 404B in Fig. 5); and wherein displaying the list of one or more service references associated with the selected tree node in the graphical user interface comprises: displaying the list of one or more service references associated with the service represented by the selected tree node in a second window pane of the graphical user interface (406A in Fig. 4 and 406B in Fig. 5).

For claims 3 (method), 13 (apparatus), 21 (system) and 26 (article of manufacture), Melchione further teaches ***displaying the list of one or more service references associated with the selected tree node comprises: displaying a service reference name, for each listed service reference, wherein the service reference name is to identify the service reference*** ("Enforce VirusScan for Win9x Policies", "inherit" in Fig. 4; "Prompt for user action", "Move infected files automatically",

"delete infected files automatically" etc. are considered as names for these service references as shown in Fig. 5).

For claims 5-6 (method), 15 (apparatus), 23 (system) and 28 (article of manufacture), Melchione further teaches ***wherein the displayed relationship value is hard, if the listed service reference is to be automatically started when the service represented by the selected tree node is started*** (selected status of the radio buttons and check boxes constitutes a hard relationship value); ***and the displayed relationship value is weak, if the listed service reference is not automatically started when the service represented by the selected tree node is started*** (unselected status of the radio buttons and check boxes constitutes a weak relationship value).

For claims 7-8 (method) and 29 (article of manufacture), Melchione further teaches ***displaying the list of one or more service references associated with the selected tree node further comprises: displaying a service reference type for each listed service reference, wherein the service reference type is to specify a service reference type for the listed service reference*** because displaying the name of each listed service reference also serves as displaying the type of the service reference. As shown in Fig. 4 and 5, the name of the depicted service references specifies the type of the service references as a "service" type.

For claims 9 (method), 16 (apparatus) and 24 (system), Melchione further teaches ***selecting one of the listed service references; and providing a relationship value for the selected service reference to specify whether the selected service reference is to be automatically started when the service represented by the selected tree node is started*** (pointing and clicking the mouse button to activate a radio button or check box constitutes selecting one of the listed service references and providing a relationship value).

**Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hessmer, E, and Melchione as applied to claim 10 above, and further in view of Digiorgio et al. (US 2001/0005201) hereinafter Digiorgio.**

For claim 11, Melchione does not teach that the graphical user interface is a Swing-based graphical user interface. However, the Java Swing technology was well known and widely used technology in the art for creating graphical user interface at the time of the invention. Digiorgio teaches displaying a GUI using Java Foundation Classes (JFC) that uses "Swing" ([0052]). Therefore, it would have been obvious for a person of ordinary skill in the art at the time of the invention to modify Melchione's teaching with that of Digiorgio to utilize a Swing-based graphical user interface. The motivation would have been to achieve portability among various platforms and simplify implementation (Digiorgio, [0052]).

**Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hessmer , E, and Melchione as applied to claim 10 above, and further in view of Ismael et al. (US 6,061,721) hereinafter Ismael.**

For claim 12, Melchione does not teach that each of the one or more tree nodes comprises a managed bean to provide a management interface for the represented application server resource. Ismael teaches a bean-based management system that uses managed beans to abstract, control and monitor system resource using a graphical user interface. Therefore, it would have been obvious for a person of ordinary skill in the art at the time of the invention to modify Melchione's teaching with that of Ismael to use managed beans as tree nodes to provide a management interface for the represented application server resource. The motivation would have been to utilize the reusable component feature of a bean object and develop a more flexible network management environment (Ismael, column 2 lines 3-5).

### ***Response to Arguments***

Applicant's arguments filed 05/28/2008 have been fully considered but they are not persuasive.

Applicants have basically argued that the Examiner relies on the network architecture of Hessmer for the limitation of the cluster of application servers as recited in the claims, and that there is nothing in the disclosure of Hessmer that suggests that the data access servers and the remote nodes in which they operate are architected as a cluster of application server instances as described in the specification and recited in

the claims. The Examiner disagrees since the Examiner relied on Hessmer for teaching a GUI with a tree structure for providing monitoring of a network resources and relied on the E reference for the particular limitations having to do with the cluster of application servers as recited in the claims.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RASHEDUL HASSAN whose telephone number is (571)272-9481. The examiner can normally be reached on M-F 7:30AM - 4PM EST.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on 571-272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rashedul Hassan/  
Examiner, Art Unit 2179

/Weilun Lo/  
Supervisory Patent Examiner, Art Unit 2179